DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

A13NM Revision 12 Bombardier DHC-8-100 Series DHC-8-200 Series DHC-8-300 Series DHC-8-400 Series

July 12, 2000

TYPE CERTIFICATE DATA SHEET NO. A13NM

This data sheet which is a part of Type Certificate No. A13NM, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder Bombardier Inc.

123 Garratt Boulevard Downsview, Ontario Canada M3k 1Y5

1. DHC-8-100 Series (see Note 5)

Model -101 - Approved Dec. 11, 1984, by the FAA and Sept. 28, 1984, by the Canadian Department of Transport

Model -102 - Approved Aug. 7, 1986, by the FAA and June. 12, 1986, by the Canadian Department of Transport

Model -103 - Approved Nov. 30, 1988, by the FAA and July. 20, 1987, by the Canadian Department of Transport

Model -106 - Approved Dec. 10, 1993, by the FAA and Nov. 20, 1992, by the Canadian Department of Transport

Data Pertinent to all Models Except as Indicated

Engines 2-Pratt & Whitney Canada, Inc., PW120 or PW120A (-101)

2-Pratt & Whitney Canada, Inc., PW120A or PW120 (-102) 2-Pratt & Whitney Canada, Inc., PW121 (-103) 2-Pratt & Whitney Canada, Inc., PW121 (-106) (See Data Pertinent to All Models Except as Indicated)

Fuel ASTM D1655 Jet A, Jet A1, Jet B and MIL-T-5624 JP-4 & JP-5 conforming to

Pratt and Whitney Canada, Inc. Specification No. CPW 204

Oils conforming to Pratt and Whitney Canada, Inc.

Specification No. PWA 521 Type II (MIL-L-23699).

Engine Limits See AFM as listed under Approved Publications

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Propelle	and Pror	eller l	imits
TIODCHC	anuitoi		

2-Hamilton Standard Model 14SF-7

Blade SFA13()-0A Diameter 3.96M (13 Ft)

Pitch settings at 0.75 radius:

 $\begin{array}{ccc} Propeller \, (Np) - & Takeoff & 1200 \, r.p.m. \\ & Max \, Continuous & 1200 \, r.p.m. \end{array}$

(See Data Pertinent to All Models Except as Indicated)

			Knots	<u>m.p.h</u> .		
Airspeed Limits	V _{MO} (Maximum operating)	0 to 14000 ft	242	279		
(IAS)		15000 ft	239	275		
		20000 ft	223	257		
		25000 ft	207	238		
	V _{FE} (Flaps extended)	Flaps 50	148	170		
		Flaps 15 ⁰	148	170		
		Flaps 35 ^o	130	150		
	V _A (Maneuvering)		163	188		
	V _{LO} (Landing gear operation)		158	182		
	V _{LE} (Landing gear extended)		172	198		
	V _R (Rough Air)		180	207		
	Landing Gear Doors Open Operative		140	161		
	Speed (Max. speed for operation					
	following an alternate land	ing gear				
	extension)					
	V _{MCA} (Minimum control speed) Flaps	s 50	79	91		
		15 ^o	75	86		
Maximum Weight	DHC-8-101	Take-off weight 14,	,970 kg (33,000) lb)		
(Mass)	DHC-8-102	Take-off weight 15,	650 kg (34,500) lb)		
	DHC-8-103	Take-off weight 15,650 kg (34,500 lb)				
	DHC-8-106	Take-off weight 16,	466 kg (36,300) lb)		
	(For other weights see Al	FM as listed under A	pproved Publ	ications)		
CG Limits	See AFM as listed under	Approved Publication	ons			
Maximum Baggage	454 kg (1000 lb) (See Wei configuration) 907 kg (200	-		l passenger cargo		

2. DHC-8-200 Series

Model -201 - Approved January 4, 1996, by the FAA and August_24, 1995, by the Canadian Department of Transport Model -202 - Approved April 19, 1995, by the FAA and March 9, 1995, by the Canadian Department of Transport

Engines 2-Pratt & Whitney Canada, Inc., PW123C (201)

2-Pratt & Whitney Canada, Inc., PW123D (202)

(See Data Pertinent to All Models Except as Indicated)

Fuel ASTM D1655 Jet A, Jet A1, Jet B and MIL-T-5624 JP-4 & JP-5 conforming to

Pratt and Whitney Canada, Inc. Specification No. CPW 204

Oils conforming to Pratt and Whitney Canada, Inc. Specification No. PWA 521

Type II (MIL-L-23699).

Engine Limits See AFM as listed under Approved Publications

<u>Propeller and Propeller Limits</u> 2-Hamilton Standard Model 14SF-23

Blade SFA13()-0A Diameter 3.96M (13 Ft) Pitch settings at 0.75 radius:

Propeller (Np) - Takeoff 1200 r.p.m.

Max Continuous 1200 r.p.m.

(See Data Pertinent to All Models Except as Indicated)

			<u>Knots</u>	<u>m.p.h</u> .
Airspeed Limits V _{MO} (Maximum operating)	0 to 14000	ft	242	279
(IAS)	15000) ft	239	275
	20000) ft	223	257
	25000) ft	207	238
V _{FF} (Flaps extended)	Flaps	5 ⁰	148	170
	Flaps	15 ^o	148	170
	Flaps	35°	130	150
V_{Δ} (Maneuvering)			163	188
V _{LO} (Landing gear operation)			158	182
V _{LE} (Landing gear extended)			172	198
V _B (Rough Air)			180	207
Landing Gear Doors Open Operation	ve		140	161
Speed (Max. speed for operation				
following an alternate la	nding gear exter	nsion)		
V _{MCA} (Minimum control speed)	Flaps	5 ^o	79	91
HICH 2	_	15 ^o	75	86

Maximum Weight (Mass) All Models, Take-off weight 16,466 kg (36,300 lb)

(For other weights see AFM as listed under Approved Publications)

<u>CG Limits</u> See AFM as listed under Approved Publications

Maximum Baggage 907 kg (2000 lb) (See Weight and Balance Manual for mixed passenger cargo

configuration)

3. **DHC-8-300 Series**

Model -301- Approved June 8, 1989, by the FAA and Feb. 14, 1989, by the Canadian Department of Transport

Model -311- Approved September 14, 1990, by the FAA and July 31, 1990, by the Canadian Department of Transport

Model -315- Approved June 28, 1995, by the FAA and June 2, 1995, by the Canadian Department of

Transport

Engines 2-Pratt & Whitney Canada, Inc., PW123 (-301 and -311)

2-Pratt & Whitney Canada, Inc., PW123E (-315)

(See Data Pertinent to All Models Except as Indicated)

Fuel ASTM D1655 Jet A, Jet A1, Jet B, and MIL-T-5624 JP-4 & JP-5 conforming to

Pratt and Whitney Canada, Inc. Specification No. CPW 204

Oils conforming to Pratt and Whitney Canada, Inc. Specification No. PWA 521

Type II (MIL-L-23699).

Engine Limits See AFM as listed under Approved Publications

Propeller and 2-Hamilton Standard Model 14SF-15 or 14SF-23

Propeller Limits

Blade SFA13 ()-0A

Diameter 3.96M (13 Ft)

Pitch settings at 0.75 radius:

Feather 77.5° Flight fine 11.5° Ground fine -7.5° Full reverse -18.5°

Propeller (Np) - Takeoff 1200 r.p.m.

Max Continuous 1200 r.p.m.

Knots

m.p.h.

(See Data Pertinent to All Models Except as Indicated)

			1111010	mpm.
Airspeed Limits	V _{MO} (Maximum operating)	0 to 17000 ft	243	280
(IAS)		20000 ft	232	267
		25000 ft	214	246
	DHC-8-301			
	V _{FF} (Flaps extended)	Flaps 50	160	184
	TE -	Flaps 10 ^o	149	171
		Flaps 15 ⁰	149	171
		Flaps 35 ^o	135	155
	V _A (Maneuvering)		176	203
	V _{LO} (Landing gear operation)		158	182
	V _{LE} (Landing gear extended)		173	199
	V _R (Rough Air)		188	216

3. DHC-8-300 Series (cont'd

5. DITC-6-300 Serie	ss (cont u				
				<u>Knots</u>	<u>m.p.h.</u>
	Landing Gear Doors Open Operative			140	161
	Speed (Max. speed for operation				
	following an alternate landing	gear exter	nsion)		
	V _{MCA} (Minimum control speed)	Flaps	5 ⁰	83	96
	WCA .	Flaps	15 ^o	77	89
		•			
	DHC-8-311 and 315				
	V _{FE} (Flaps extended)	Flaps :	50	163	187
	PE (I	Flaps 1		154	177
		Flaps 1		150	173
		Flaps 3		138	159
	V _A (Maneuvering)	1 Tups 5		177	204
	V _{LO} (Landing gear operation)			163	187
	V _{LE} (Landing gear extended)			173	199
	V _E (Rough Air)			190	219
	Landing Gear Doors Open Operative			140	161
	Speed (Max. speed for operation			140	101
	following an alternate landing	gear			
	extension)	T21	1.50	70	00
	V _{MCA} (Minimum control speed)	Flaps	15 ⁰	78	90
		Flaps	10 ^o	80	92
		Flaps	50	83	95
		Flaps	$0_{\mathbf{O}}$	95	109
M : 337 : 14	DHC 0 201		Tr. 1	CC : 1, 10, 6	10.1 (41.100.11)
Maximum Weight	DHC-8-301			-	10 kg (41,100 lb)
(Mass)	DHC-8-311 and 315		таке-о		40 kg (41,100 lb)
			/ 1.1		00 kg (41,880 lb)
			(With		01 incorporated)
					00 kg (43,000 lb)
			*		2 incorporated)
	(For other weights see AFM	l as listed u	ınder Ap	proved Public	eations)
aart t	G 4574 11 1 1 1	1.5			
CG Limits	See AFM as listed under Ap	proved Pu	blication	18	
Maximum Daggaga	1 120 kg (2500 lb) for standa	محمحمط المسا		tmant (Caa Wa	sight and Dalamas
Maximum Baggage	1,130 kg (2500 lb) for standa Manual for other configurat		compar	imeni (See we	eight and Barance
	ivianuai 101 otnei configurat	10118)			
Cargo/Combi	All cargo, 20, 40 or 48 passe	nger confi	gurations	s with a moves	hle nassenger/
(DHC-8-311)	cargo bulkhead located at sta	-	-		
(DIIC 0 311)	cargo ourknead rocated at sta	177.0,	JJ7.U, J	15.0 01 577.01	copectively

4. DHC-8-400 Series

	M- 1-1 400	A	-1 I 26 2000 h 4h- EAA	1 11 20	1000 1	41 C	4: D	
	Model 400	Transpo	ed January 26, 2000 by the FAA ort	and July 50,	1999 by	the Cana	dian Dep	artment of
	Model 401	Approv of Trans	ed January 26, 2000 by the FAA sport	and August	3, 1999 t	y the Ca	nadian D	Department
	Model 402		red January 26, 2000 by the FAA	and August	4, 1999 t	y the Ca	nadian D	Department
	Engines		& Whitney Aircraft of Canada en 400, 401 and 402 PW1		ows:			
	Fuel	ASTM 1	ne Type: D1655 JET A, ASTM D1655 JET 5624 JP-5, MIL-T-5624 JP-8	A1				
			ut Type: D1655 JET B, MIL-T-5624 JP-4					
		conforn	ning to Pratt & Whitney Canada, I	nc. Specifica	ation No.	CPW 20	4	
	Oil	Oils cor Publica	nforming to specification MIL-L-2 tions.)	23699 (See A	AFM as li	sted in A	pproved	
	Engine Limits Propeller and Propeller Limits		See AFM as listed in Approved Dowty Aerospace Model R408/6		s.			
			Blade Diameter		4.11 M	(13.5 ft.)	nominal	
			Pitch setting at 0.75 radius: Feather Flight fine (Electronic) Flight fine (Hydraulic) Ground fine Full reverse Propeller (NP) - Take-off Max. continuous		84.5° 16.5° 16.0° -3.5° -18.5° 1020 rp:			
Airspeed (IAS)	d Limits	V_{MO}	(Maximum Operating) 0 to 8,000	10,000 ft 18,000 ft 20,000 ft 25,000 ft	t 286 t 275	Knots	282 325 329 316 285	m.p.h
		V _{EE} (Fla	ps extended)	Flap 5° Flap 10° Flap 15° Flap 35°	0	200 181 172 158		230 208 198 182

V _A (Maneuvering)		163	188
V _{LO} (Landing gear operation)		200	230
V _{LE} (Landing gear extended)		215	247
V _B (Rough Air)		210	242
Landing Gear Door Open Operative Sp	peed	185	213
(Max. Speed for operation following a	n alternate		
landing gear extension)			
V _{MCA} (Minimum control speed)	Flap 15°	91	105
	Flap 10°	95	109
	Flap 5°	98	113
	Flap 0°	113	130

(Refer to AFM for airspeed limits)

Maximum Weight Take-off weight: All Models	27783 K	g ((61,250 lb)
Models 400, 401 and 402			
(With Modsum 4Q301700 inc	orporated)	27996 Kg	(61,720 lb)
(With Modsum 4Q301600 inc	orporated)	28,690 Kg	(63,250 lb)
(With Modsum 4-201539 inco	rporated)	27,987 Kg	(61,700 lb)
(With Modsum 4-308807 inco	rporated)	28,998 Kg	(63,930 lb)
(With Modsum 4-308907 inco	orporated)	29,257 Kg	(64,500 lb)

C.G. Limits See AFM as listed in Approved Publications.

Maximum Baggage For standard baggage compartments (without APU and with G3 galley installed)

Aft baggage compartment: 1315 Kg (2900 lb) Fwd baggage compartment: 412 Kg (910 lb)

See Weight and Balance Manual for other configurations

DATA PERTINENT TO ALL MODELS EXCEPT AS INDICATED:

Series 100, 200 and 300:

Propeller and Propeller Limits

The following Hamilton Standard Propeller combinations are approved.

Basic Aircraft					
Model	Models	Models	Models		
101	102, 103 & 106	201 & 202	301, 311, & 315		
14SF-7 & -7	14SF-7 & -7	14SF-23 & -23	14SF-15 & 15		
			14SF-23 & -23		

Modification 8/2579 allows the following additional Hamilton Standard Propeller combinations.

Models 102, 103, & 106	Models 201 & 202	Models 301, 311, & 315
14SF-15 & 14SF-15	14SF-15 & 14SF-15	14SF-15 & 14SF-23
14SF-15 & 14SF-7	14SF-15 & 14SF-23	
14SF-15 & 14SF-23		
14SF-23 & 14SF-23		
14SF-23 & 14SF-7		

Engines

The following Pratt & Whitney Aircraft of Canada engine combinations are approved. Any combination of original engines and/or optional engines within each aircraft model is permitted. Optional engines must incorporate modification 8/2735

	Approved Engine Combinations	
Aircraft Model	Original Engine	Optional Engine
201	PW123C	PW123
		PW123B
		PW123D
		PW123E
202	PW123D	PW123
		PW123B
		PW123E
301 and 311	PW123	PW123B
		PW123E

The following P&WC Service Bulletin matrix lists the service bulletins which must be incorporated to change an optional engine to the rating of an original engine. The cancelling derate service bulletin is also shown.

P&WC Service Bulletin Matrix							
Optional Engine	Original Engine	P&WC S.B.	P&WC S.B.				
	Rating	Derate	Cancel Derate				
PW123	PW123C	21501	21502				
	PW123D						
	PW123						
PW123B	PW123C	21499	21500				
	PW123D						
PW123D	PW123C	21503	21504				
	PW123						
PW123E	PW123C	21497	21498				
	PW123D						

Reference Datum

(Series 100, 200, 300) Plate located on centerline at Station 423.0 in. (1074.4 cm) on underside of

fuselage.

(Series 400) Plate located on centerline at "Station 428.0 in" (1087.1 cm) on underside of

fuselage.

<u>Leveling Means</u> Plum bob and target in RH emergency exit opening.

Minimum Crew 2 (Pilot and Copilot)

Maximum Series 100 and 200

Occupants Not to exceed 44, including 2 pilots, 1 attendants and 1 check pilot (40

passengers when fitted with an approved interior)

Series 300

Not to exceed 61, including 2 pilots, 2 attendants and 1 check pilot

(56 passengers when fitted with an approved interior)

Series 400

Model 400:

Not to exceed 73, including 2 pilots, 2 attendants and 1 check pilot (68 passengers when fitted with an approved interior)

Model 401:

Not to exceed 75, including 2 pilots, 2 attendants and 1 check pilot (70 passengers when fitted with an approved interior)

Model 402:

Not to exceed 83, including 2 pilots, 2 attendants and 1 check pilot (78 passengers when fitted with an approved interior)

Flight Load Factors	Flaps Up Flaps extended	+2.5g +2.0g					
<u>Factors</u>	riaps extended	+2.0g	, 0.0g.				
Fuel Capacity		<u>kg</u>	<u>lb</u>	US Gal	Imp Gal		
(Series 100, 200, 300)	Usable	2575	5678	835	695		
	Unusable	40	87	13	11		
	Total	2615	5765	848	706		
(Series 400)	Usable	5321	11731	1724	1436		
	Unusable	73	161	24	20		
	Total	5394	11892	1748	1456		
Oil Capacity Per Engine				<u>US Gal</u>	Imp Gal		
	PW120/120A/121		Usable	1.0	0.83		
	1 ** 120/120/121		Total	4.7	3.9		
	PW123/123B/123E		Usable	1.9	1.6		
	F W 123/123B/123E		Total	5.5	4.57		
(5.4.400)							
(Series 400)	PW150A		Usable	1.48	1.23		
			Total	6.58	5.48		
Maximum Operating Altitude	Take-off and landing		10,000 feet				
	Enroute	25,000 fe	eet				
Outside Air Temperature Limits	See AFM, as listed under Approved Publications						
Control Surface	See Maintenance Manu	ual:	Series 100 PSM 1	-8-2			
			Series 200 PSM 1	-82-2			
			Series 300 PSM 1	-83-2			

Import Eligibility

A U.S Airworthiness certificate may be issued on the basis of the Canadian Department of Transport "Certificate of Airworthiness for Export" signed by the Minister of Transport. This form must contain the following statement: "This certifies that the aircraft described above has been manufactured in conformity with the data forming the basis for the DOT Aircraft Type Approval No. A-142 as modified in accordance with the requirements for U.S. registered airplanes FAA Type Certificate No. A13NM defined in AEROC 8.1.AC.1."

Series 400 PSM 1-84-2

Certification Basis

Series 100, 200 and 300:

FAR Part 25 dated February 1, 1965 including Amendments 25-1 through 25-51; FAR 25.832, Amendment 25-56; FAR 36 dated December 1, 1969 including Amendments 36-1 through 36-12; SFAR 27 dated December 12, 1973 including Amendments 27-1 through 27-5.

Application for Type Certificate: March 31, 1980 (Series 100)

Series 200 Additional Requirements:

FAR Part 25, Amendments 25-52 through 25-66; FAR 25.963(e), Amendment 25-69; FAR 25.361, Amendment 25-72; FAR 25.729(e), Amendment 25-75; FAR Part 34 dated September 10, 1990 (Replaces SFAR 27); FAR Part 36, Amendments 36-1 through 36-20

With the following exceptions (See Note 6)

FAR 25.365(e), Amendment 25-54; FAR 25.561, Amendment 25-64;

FAR 25.562, Amendment 25-64; FAR 25.783, Amendment 25-54;

FAR 25.785, Amendment 25-64; FAR 25.904, Amendment 25-62;

FAR 25.1091(e), Amendment 25-57

Series 300 Additional Requirements:

All Models;

FAR 25.812, Amendment 25-58

DHC-8-301;

FAR 25.853, Amendment 25-59

DHC-8-311 and 315;

FAR 25.853, Amendment 25-66

DHC-8-315:

FAR Part 34 dated September 10, 1990 (Replaces SFAR 27); FAR Part 36, Amendments 36-1 through 36-20

Series 100, 200 and 300

Items of Equivalent Safety

- 1. Pilot compartment view FAR 25.773(b)(2).
- 2. Ditching emergency exits FAR 25.807(d)(2) Amd t. 25-55. (DHC-8-311 and 315 with CR803SO00001 or CR803SO00002 incorporated)
- Cargo compartment classification FAR 25.857(b)&(d) Amdt. 25-60, for the 20, 40 & 48 passenger configurations. DHC-8-311 Flight Manual Suppl. 42, Iss. 3, Cargo Loading Manual PSM 1-83-8A, Suppl. 1, Iss. 3 and Weight & Balance Manual PSM 1-83-8C are required. (S/N 230 & 242)

Special Conditions

1. Automatic take-off power control system (ATPCS) (ref. FAA Special Conditions No. 25.-ANM-3).

Exemptions

- 1. FAR 25.571(e)(2) Propeller Debris (ref. FAA exemption No. NM-102)
- 2. FAR 25.807(c)(1) 40 passenger configuration Series 100 and 200 (ref. FAA exemption No. 4723 dated October 24, 1986)

<u>Compliance with the following additional optional requirements has been</u> established:

Ice Protection - FAR 25.1419

Compliance with FAR 25.801 has been established when the safety equipment requirements of FAR 25.1411 and the ditching equipment requirements of FAR 25.1415 are satisfied.

Certification Basis

Series 400:

Federal Aviation Regulations (FAR) Part 25, Airworthiness Standards: Transport Category Airplanes, dated 01 February 1965, Amendments 25-1 through 25-83 Federal Aviation Regulations (FAR) Part 34, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes, effective 10 September, 1990, including Amendment 34-3 effective February 3, 1999.

Federal Aviation Regulations (FAR) Part 36, effective 1 December, 1969, including Amendment 36-1 through 36-21.

Additional Requirements:

Federal Aviation Regulations (FAR) Part 25, Airworthiness Standards: Transport Category Airplanes, dated 01 February 1965, Amendments 25-84 through 25-86, and 25-92.

<u>Items of Equivalent Safety</u>:

FAA Issue Paper F-1. "Use of 1-g Stall Speed Criteria Instead of Minimum Speed in the Stall"

Special Condition:

- 1. Special Condition No. 25-ANM-121, High Intensity Radiated Fields (HIRF)
- Special Condition No. 25-154-SC, Automatic take-off power control system (ATPCS)

Exemptions:

- 1. Exemption No. 6790 to FAR 25.571(e)(1) "Damage Tolerance (Discrete Source) Evaluation at Amendment 25-72"
- 2. Exemption No. 6833 to FAR 36 Appendix C, Section C36.3©. "Definition of noise Sideline Point [compliance will be shown with ICAO Annex 16, Vol. 1, Iss. 3, Amendment 5, Chapter 3, Section 3.3.1(a)(2)]
- 3. Exemption No. 6864 to FAR 25.1435(b)(1) "Hydraulic System Test and Analysis, at Amendment 25-72"

Optional Requirements:

1. Ice Protection: FAR 25.1419

2. Ditching: Compliance with FAR 25.801 has been established when the safety requirements of FAR 25.1411 and the ditching equipment requirements of FAR 25.1415 are satisfied

Serial Numbers Eligible

Series 100

Serial number 2 and subsequent

Series 200

Serial number 391 and subsequent

Series 300

Serial number 100 and subsequent

Series 400

Serial 4001 and subsequent

Equipment

The basic required equipment as prescribed in the applicable airworthiness requirements (See Certification Basis) must be installed in the aircraft.

Approved Publications

Flight Manual

Series 100: PSM 1-81-1A (Models 101, 102, 103 and 106)

Series 200: PSM 1-82-1A (Model 201, 202)

Series 300: PSM 1-83-1A (Models 301, 311 and 315) Series 400: PSM 1-84-1A (Models 400, 401 and 402)

Airworthiness Limitations (Part 2) and MRB Report (Sections 2 and 3) of the

Maintenance Program Series 100: PSM 1-8-7 Series 200: PSM 1-82-7 Series 300: PSM 1-83-7

Maintenance Requirements Manual, MRM (Section 1, MRB report and Section 2,

Airworthiness Limitation Items

Series 400: PSM 1-84-7

Definition Report AEROC 8.1.AC.1

Service Information

Service Bulletins, structural repair manuals, and aircraft flight manuals which contain a statement that the document is Transport Canada approved or Transport Canada approved through the Manufacturers Design Approval Representative are accepted by the FAA and are considered FAA approved. These approvals pertain to the type design only.

Life Limited Parts

Components which are life limited are listed in the "Airworthiness Limitations" section of the Maintenance Program. (See Note 3).

Note 1.

A current weight and balance report including list of equipment included in certificated empty weight, and loading instructions must be in each aircraft at the time of original certification and at all times there after except in the case of operators having an approved weight control system. The aircraft total system fuel must be included in the empty weight. System fuel is the amount of fuel required to fill the system plumbing and tanks to the undrainable level <u>plus</u> unusable fuel in the tanks established under FAR 25.959.

The aircraft must be loaded so that the C.G. is within specified limits at all times, considering fuel loading and usage, gear retraction, and movement of crew and passengers from their assigned positions.

- Note 2. The aircraft must be operated in accordance with the FAA Approved Airplane Flight Manual.
- Note 3. Compliance with the frequencies for "Threshold" and "Repeat" inspection specified in the "Airworthiness Limitations", Volume 1, Part 2 of the Maintenance Program (PSM 1-8-7, PSM 1-82-7 and PSM 1-83-7) and MRB report Volume 1, Part 1 of the same document, are required to ensure continuing compliance with the type certification basis. For Series 400, the "Threshold" and "Repeat" inspections are specified in Part 2 of the MRM (Airworthiness Limitations) and Part 1 of the MRM (MRB report).
- Note 4. For mixed passenger/cargo configurations see weight and balance manual.
- Note 5. Modifications required to convert a Model DHC-8-101 to a 102, a 102 to a 103, a 102/103 to a 106, and a 311 to a 315 are identified in Bombardier Definition Report AEROC 8.1.AC.1 listed in Approved Publications.
- Note 6. The DHC-8 Series 200 was certificated as a derivative of the Series 100 aircraft. The applicable basis of certification is the same as the Series 100, but the manufacturer elected to demonstrate compliance with FAR Part 25, up to Amendment 25-66, less the exceptions shown under the Series 200 Certification Basis.